STATE OF MARYLAND

DHMH

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April 23, 2010

Public Health & Emergency Preparedness Bulletin: # 2010:15
Reporting for the week ending 04/17/10 (MMWR Week #15)

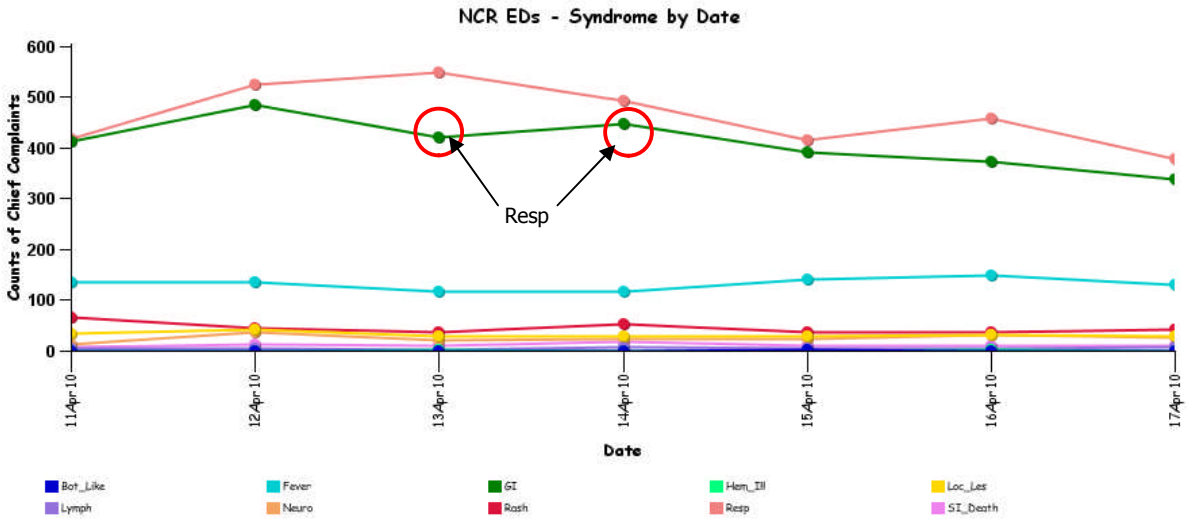
CURRENT HOMELAND SECURITY THREAT LEVELS

National: **Yellow (ELEVATED) *The threat level in the airline sector is Orange (HIGH)**
Maryland: **Yellow (ELEVATED)**

SYNDROMIC SURVEILLANCE REPORTS

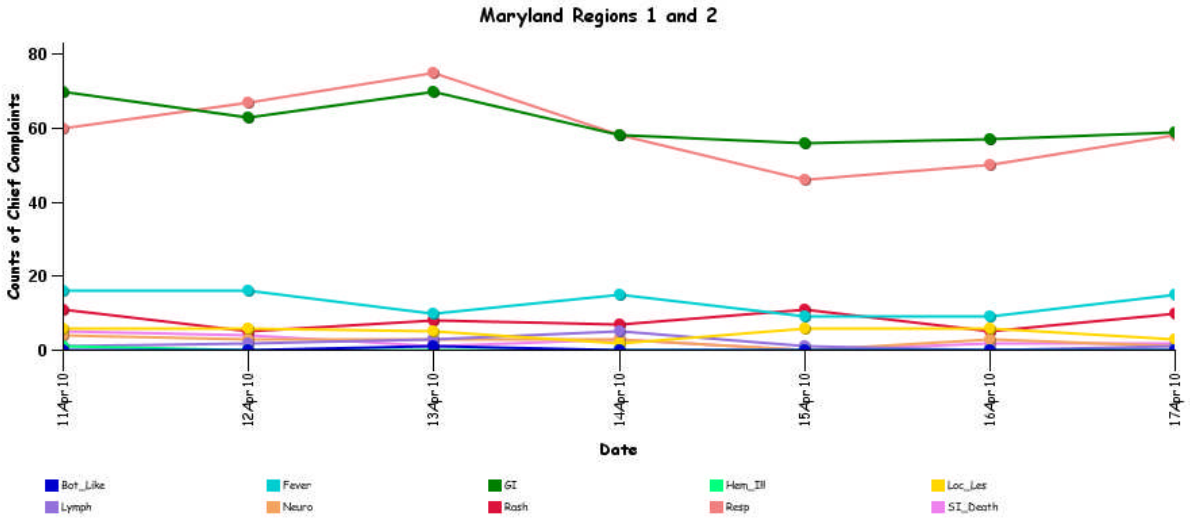
ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics):
Graphical representation is provided for all syndromes, excluding the "Other" category, all age groups, and red alerts are circled.
Note: ESSENCE – ANCR Spring 2006 (v 1.3) now uses syndrome categories consistent with CDC definitions.

Overall, no suspicious patterns of illness were identified. Track backs to the health care facilities yielded no suspicious patterns of illness.

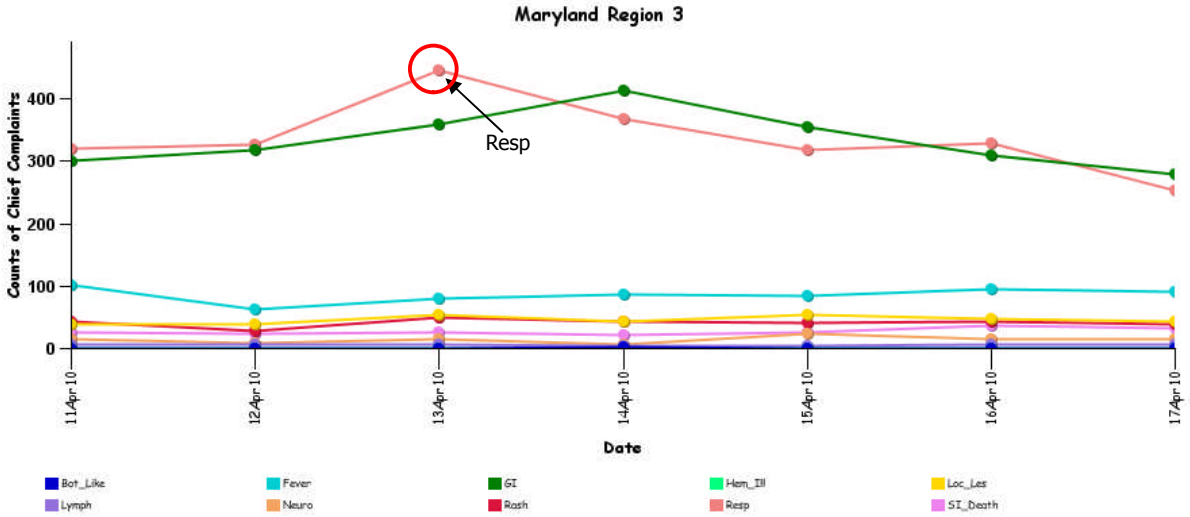


* Includes EDs in all jurisdictions in the NCR (MD, VA, and DC) reporting to ESSENCE

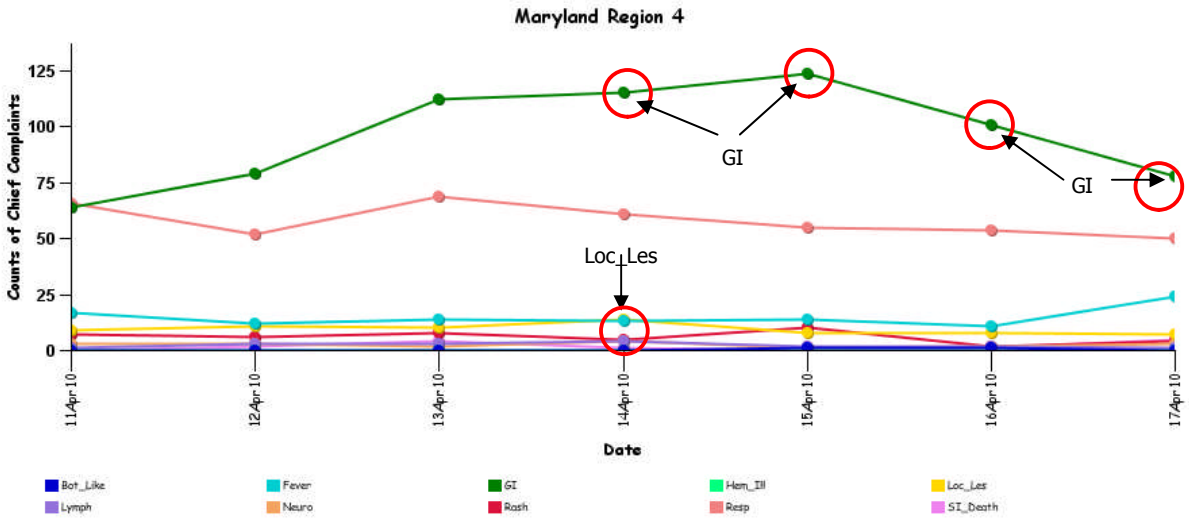
MARYLAND ESSENCE:



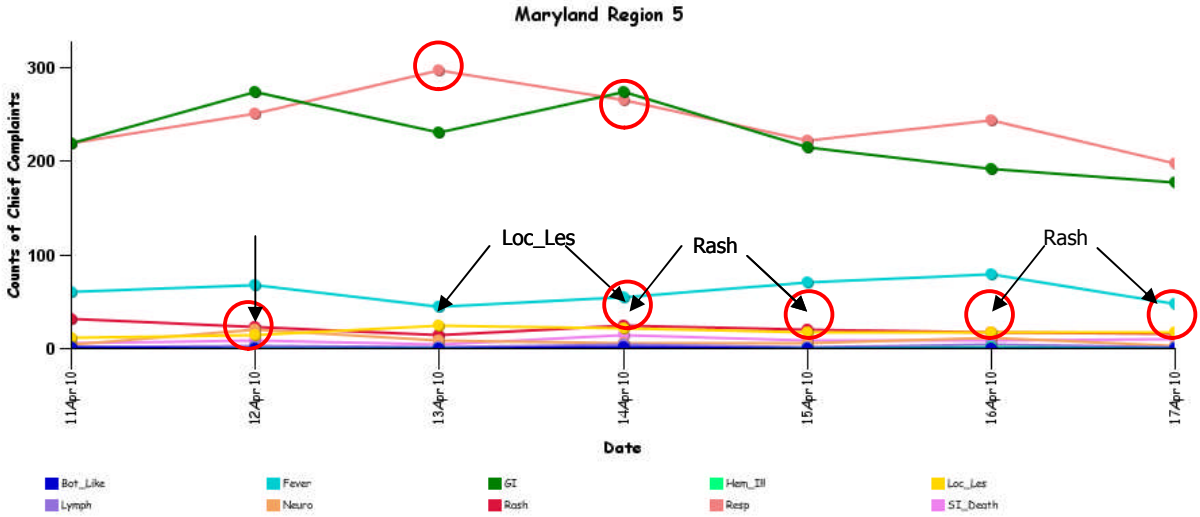
* Region 1 and 2 includes EDs in Allegany, Frederick, Garrett, and Washington counties reporting to ESSENCE



* Region 3 includes EDs in Anne Arundel, Baltimore city, Baltimore, Carroll, Harford, and Howard counties reporting to ESSENCE

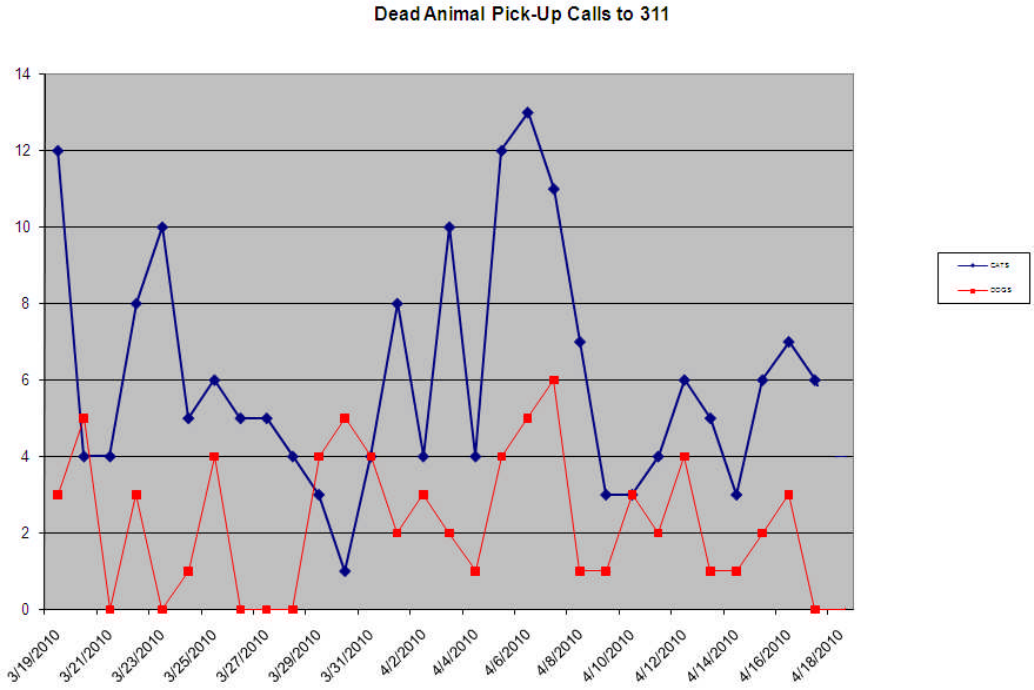


* Region 4 includes EDs in Cecil, Dorchester, Kent, Somerset, Talbot, Wicomico, and Worcester counties reporting to ESSENCE



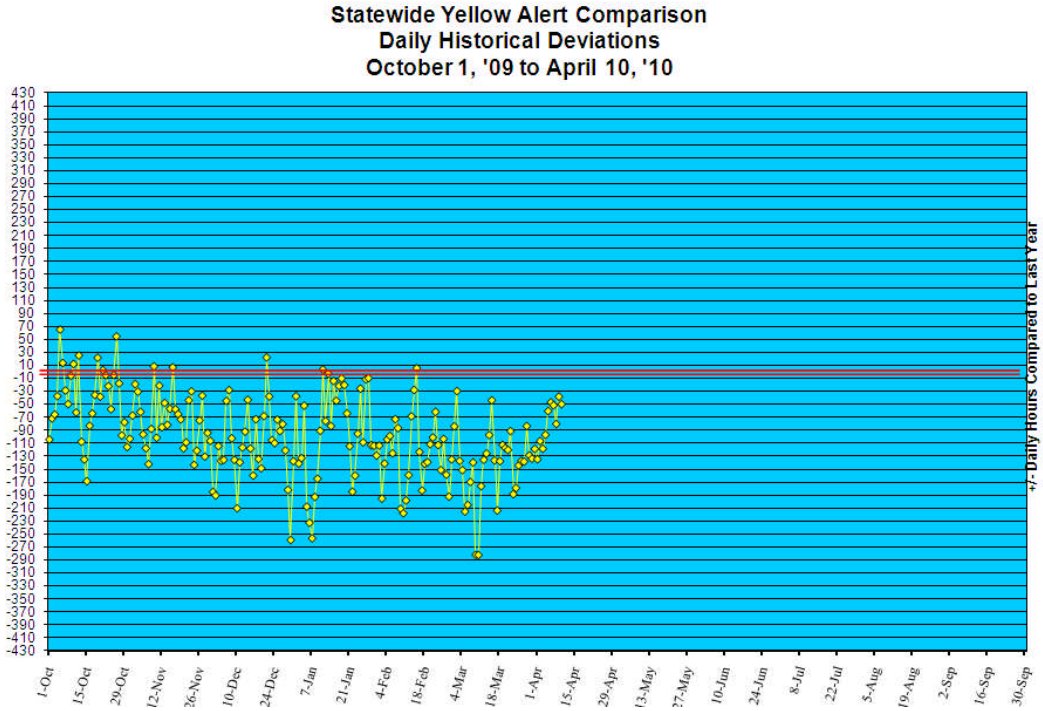
* Region 5 includes EDs in Calvert, Charles, Montgomery, Prince George's, and St. Mary's counties reporting to ESSENCE

BALTIMORE CITY SYNDROMIC SURVEILLANCE PROJECT: No suspicious patterns in the medic calls, ED Syndromic Surveillance and the animal carcass surveillance. Graphical representation is provided for animal carcass surveillance 311 data.



REVIEW OF EMERGENCY DEPARTMENT UTILIZATION

YELLOW ALERT TIMES (ED DIVERSION): The reporting period begins 10/01/09.



REVIEW OF MORTALITY REPORTS

Office of the Chief Medical Examiner: OCME reports no suspicious deaths related to an emerging public health threat for the week.

MARYLAND TOXIDROMIC SURVEILLANCE

Poison Control Surveillance Monthly Update: Investigations of the outliers and alerts observed by the Maryland Poison Center and National Capital Poison Center in March 2010 did not identify any cases of possible public health threats.

REVIEW OF MARYLAND DISEASE SURVEILLANCE FINDINGS

COMMUNICABLE DISEASE SURVEILLANCE CASE REPORTS (confirmed, probable and suspect):

Meningitis:	**Aseptic**	**Meningococcal**
New cases (April 11, April 17, 2010):	15	0
Prior week (April 04, April 10, 2010):	03	0
Week#15, 2009 (April 12- April 18, 2009):	12	0

6 outbreaks were reported to DHMH during MMWR Week 15 (April 11-17, 2010)

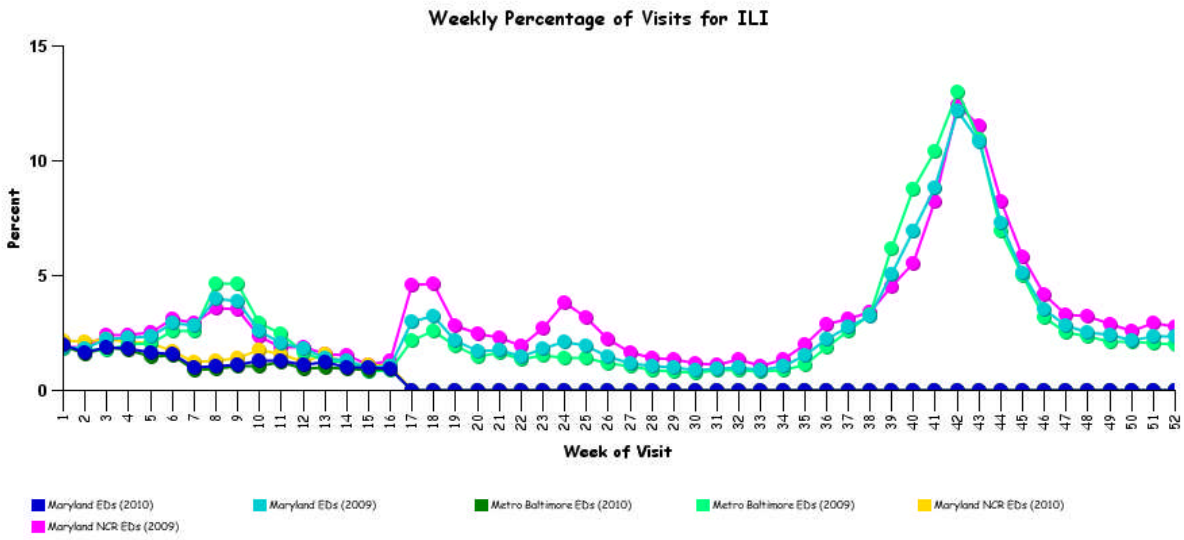
6 Gastroenteritis outbreaks
3 outbreaks of GASTROENTERITIS in Hospitals
1 outbreak of GASTROENTERITIS in a Nursing Home
1 outbreak of GASTROENTERITIS in an Assisted Living Facility
1 outbreak of GASTROENTERITIS in a School

MARYLAND INFLUENZA STATUS: Influenza activity in Maryland for Week 15 is SPORADIC.

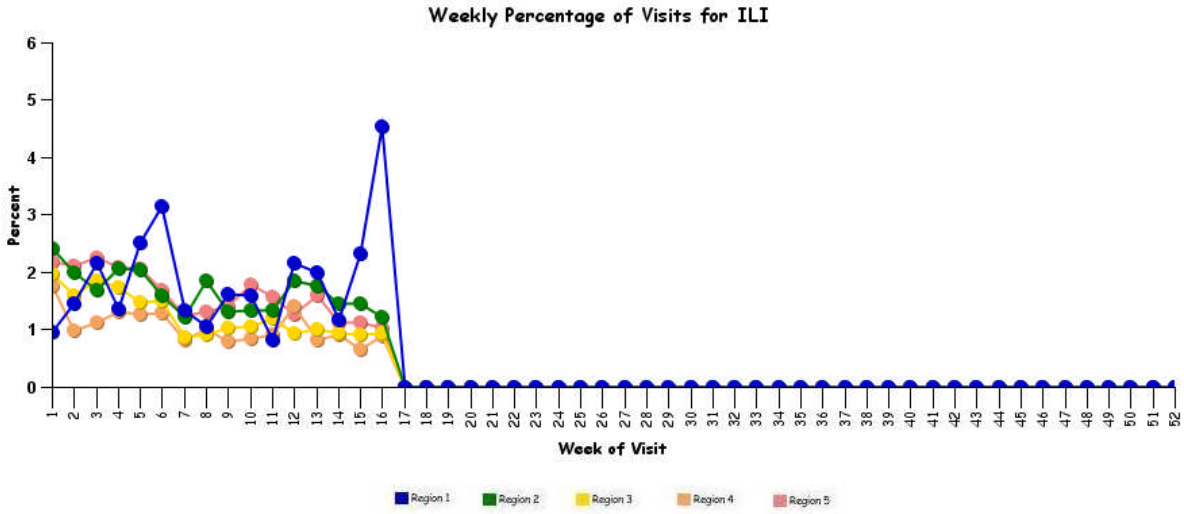
SYNDROMIC SURVEILLANCE FOR INFLUENZA-LIKE ILLNESS

Graphs show the percentage of total weekly Emergency Department patient chief complaints that have one or more ICD9 codes representing provider diagnoses of influenza-like illness. These graphs do not represent confirmed influenza.

Graphs show proportion of total weekly cases seen in a particular syndrome/subsyndrome over the total number of cases seen. Weeks run Sunday through Saturday and the last week shown may be artificially high or low depending on how much data is available for the
week.



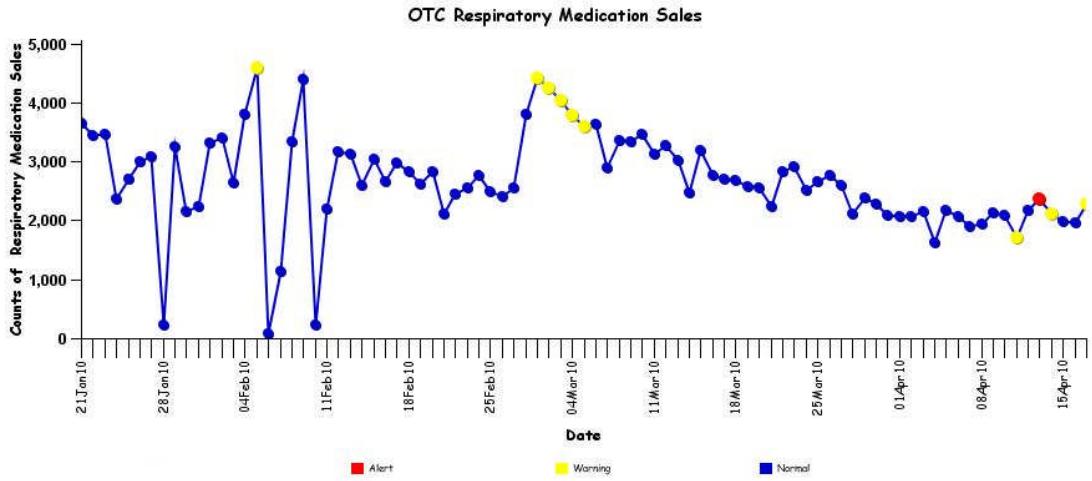
* Includes 2009 and 2010 Maryland ED visits for ILI in Metro Baltimore (Region 3), Maryland NCR (Region 5), and Maryland Total



*Includes 2010 Maryland ED visits for ILI in Region 1, 2, 3, 4, and 5

OVER-THE-COUNTER (OTC) SALES FOR RESPIRATORY MEDICATIONS:

Graph shows the daily number of over-the-counter respiratory medication sales in Maryland at a large pharmacy chain.



PANDEMIC INFLUENZA UPDATE:

WHO Pandemic Influenza Phase: Phase 6: Characterized by community level outbreaks in at least one other country in a different WHO region in addition to the criteria defined in Phase 5. Designation of this phase will indicate that a global pandemic is under way. Definition of Phase 5 is characterized by human-to-human spread of the virus into at least two countries in one WHO region. While most countries will not be affected at this stage, the declaration of Phase 5 is a strong signal that a pandemic is imminent and that the time to finalize the organization, communication, and implementation of the planned mitigation measures is short.

US Pandemic Influenza Stage: Stage 0: New domestic animal outbreak in at-risk country

**More information regarding WHO Pandemic Influenza Phase and US Pandemic Influenza Stage can be found at: http://preparedness.dhmh.maryland.gov/Docs/PandemicInfluenza/PandemicInfluenzaResponseAnnex(Version7.2).pdf

AVIAN INFLUENZA-RELATED REPORTS:

WHO update: As of April 09, 2010, the WHO-confirmed global total of human cases of H5N1 avian influenza virus infection stands at 493, of which 292 have been fatal. Thus, the case fatality rate for human H5N1 is about 59%.

H1N1 INFLUENZA (Swine Flu):

INFLUENZA PANDEMIC (H1N1), WHO Update: 17 April 2010, Worldwide more than 214 countries and overseas territories or communities have reported laboratory confirmed cases of pandemic influenza H1N1 2009, including over 17 798 deaths. WHO is actively monitoring the progress of the pandemic through frequent consultations with the WHO Regional Offices and member states and through monitoring of multiple sources of information.

Situation update: The most active areas of pandemic influenza virus transmission currently are in parts of the tropical zones of the Americas, West Africa, Eastern Africa, and South East Asia. Although pandemic influenza continues to be the predominant circulating influenza virus worldwide, seasonal influenza type B virus circulation continues to be predominant in East Asia, and is being detected across other parts of Asia, and Europe at low levels. Sporadic detections of seasonal influenza H3N2 viruses have been reported across Asia, Eastern Europe, and Eastern Africa most notably in recent weeks in Indonesia and Tanzania. Few seasonal H1N1 viruses were reported in the Russian Federation and Northern China in the last week.

In East Asia, pandemic influenza activity continued to decline and is now at very low levels. The predominant virus associated with influenza-like-illness in the area is now influenza type B viruses, which continue to circulate in China, Mongolia, and Republic of Korea. The Republic of Korea reports an increasing trend of respiratory disease activity associated with detections of influenza type B viruses and small numbers of pandemic H1N1. In China, outbreaks of acute respiratory infections associated with B virus detections are reported but none due to pandemic H1N1. The overall level of respiratory disease activity is similar to the level observed during the same period of 2007-2008 and 2008-2009 seasons. Small numbers of seasonal H3N2 and sporadic seasonal H1N1 viruses were detected in Northern China. In Mongolia, rates of influenza-like illness (ILI) continue to decline and are associated with influenza type B only.

In South and Southeast Asia, the most active areas of influenza transmission are Thailand and Singapore, where pandemic H1N1 is the dominant influenza virus, with co-circulation at lower levels of influenza type B and H3N2. Overall, the intensity of transmission is relatively low. In Thailand, respiratory disease activity has decreased since the previous week. 4 percent of sentinel respiratory samples from ILI patients and 2.6 percent of sentinel respiratory samples from hospitalized patients with pneumonia were found to be positive for pandemic H1N1. Malaysia continues to report occasional outbreaks of respiratory disease in 3 states, Johor, Pahang, and Melaka. Only Melaka state has reported pandemic H1N1 laboratory confirmed cases, with 4 cases treated in the Intensive Care Unit (ICU). In India overall pandemic H1N1 activity is very low in most states, although in western India pandemic H1N1 cases continue to be reported in low numbers.

In Europe, pandemic influenza activity has continued to decrease in recent weeks and is at very low intensity in all countries. The overall proportion of sentinel respiratory samples testing positive for influenza remained low (5.4 percent), and the number of influenza type B virus detections exceeded that of influenza A. In Italy, 50 percent (7/14) of sentinel respiratory samples tested positive for influenza, all of which were seasonal influenza type B viruses. In the northern temperate zones of the Americas, overall pandemic influenza transmission remained low as pandemic influenza H1N1 virus continues to circulate at very low levels in some areas. In temperate countries of the southern hemisphere, overall respiratory disease activity remained low.

In tropical zones of the Americas, limited data suggest that overall influenza activity remains low with localized areas of active transmission in a number of countries. In Cuba, a slight increase of confirmed cases of pandemic virus was reported during the most recent reporting week. In Mexico, available data suggest that localized active transmission of pandemic influenza virus continues to occur around Mexico City but is very low nationally. In Peru, the number of pneumonia cases has increased over the last 2 weeks, especially in children less than 5 years of age, however there is no virological information available to indicate the

cause of these cases. The lack of an associated increase in other age groups may indicate a cause other than influenza. Increased levels of ILI have also been reported across much of Brazil over the previous 2 weeks particularly in northern Brazil.

In North Africa limited available data suggest that respiratory disease activity remained low. In sub-Saharan Africa, West Africa continues to see community transmission of pandemic influenza virus with Ghana currently being the primary focus of transmission (45 percent of all clinical specimens tested were positive for pandemic influenza) but smaller numbers of cases were also seen in Senegal and Niger. Pandemic influenza virus transmission appears to have peaked in Senegal approximately one month ago. Guinea has now reported their 1st cases of pandemic H1N1. In East Africa, cases of pandemic influenza H1N1 continue to be detected in Rwanda, though in declining numbers. Small numbers of seasonal influenza H3N2 and influenza type B viruses were detected during the last week in Rwanda, Kenya, and South Africa. Notably, Tanzania has also recently reported significant transmission of seasonal influenza H3N2. No increases in respiratory disease activity or pandemic influenza have yet been noted in South Africa.

In the South Pacific, Vanuatu and Nauru reported an increasing trend of respiratory diseases activity for this week, but this trend was not associated with laboratory confirmed detections of pandemic H1N1 virus.

In other temperate countries out of the southern hemisphere, Australia and New Zealand, influenza activity continues to be low, with mostly detections of pandemic H1N1 and sporadic seasonal influenza viruses.

INFLUENZA PANDEMIC (H1N1) SEASONAL VACCINE: 15 April 2010, The World Health Organization (WHO) has recommended vaccine strains for the 2010--11 Northern Hemisphere trivalent influenza vaccine, and the Food and Drug Administration (FDA) has made the same recommendations for influenza vaccine composition for the United States. Both agencies recommend that vaccines contain A/California/7/2009-like (2009 H1N1), A/Perth/16/2009-like (H3N2), and B/Brisbane/60/2008-like (B/Victoria lineage) viruses. A seasonal influenza A (H1N1) component is not included in the 2010--11 formulation, and the A (H3N2) component has been changed from A/Brisbane/59/2007 in the 2009--10 Northern Hemisphere vaccine formulation. This recommendation was based on surveillance data related to epidemiology and antigenic characteristics, serologic responses to 2009--10 trivalent seasonal and 2009 H1N1 monovalent vaccines, and the availability of candidate strains and reagents.

Resources:

http://www.cdc.gov/h1n1flu/

http://www.dhmh.maryland.gov/swineflu/

NATIONAL DISEASE REPORTS

E. COLI O157, DAY CARE (WASHINGTON): 13 April 2010, An _E. coli_ O157:H7 infection mainly results from eating uncooked food, drinking contaminated water and unpasteurized milk, and working with cattle. Diagnosed with this potentially deadly _E. coli_ strain, one child has succumbed to the disease, and 3 other children are recovering following the outbreak of the disease at the Vancouver, Washington, day care center, according to the health officials. The 4-year-old boy who died of the disease was hospitalized on 19 Mar 2010 after he was found infected with _E. coli_ O157:H7 bacterium. Soon, 3 other children were also admitted but they have been released after the treatment. Further, the officials informed that 22 children and 4 adults were also tested. Out of these, 6 tested positive for the strain but they were not admitted as they showed no symptoms of the disease. The health officials are confident that the infection has not spread further, and they are closely investigating the cause of the disease. The cause of the cluster is yet not known, but the officials are certain that the bacteria did not come from food or water. The outbreak could be the result of unhygienic conditions at the state day care center as hands are not washed properly after toilet use or diaper change. In a statement, Clark County's health officer, Dr. Alan Melnick said, "In investigating this particular outbreak, we were not able to find a point of source or specific food or beverage item that caused the infection. What it seemed like was that there was some person to person transmission going on in the day care," he added. (Food Safety Threats are listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

INTERNATIONAL DISEASE REPORTS

JAPANESE ENCEPHALITIS (INDIA): 16 April 2010, Dozens of children have been admitted to a state-run hospital in Uttar Pradesh's Gorakhpur district with symptoms of encephalitis. The disease first came to India in 1978. Thousands of children have since succumbed to encephalitis and those who survived are either physically disabled or mentally unsound. It is not the season for the disease, yet 210 patients have been treated so far. Cases of encephalitis are expected to increase with the arrival of monsoon and may continue till December [2010]. "The most important thing is awareness among the people. Hygiene is necessary because Japanese encephalitis is transmitted by mosquitoes. There is a need to control mosquito growth and ensure personal hygiene. Japanese encephalitis can thus be reduced," said Dr AK Pandey, Research Officer at the National Institute of Virology. According to specialists, the vaccine for encephalitis should be administered around 3 months before the monsoons, but the administration has not taken up such a step so far. In 2006, the government had launched an encephalitis vaccination campaign but only a few children were benefited by the campaign. Encephalitis generally affects children between the ages of 1-15 years.
(Viral Encephalitis are listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

ANTHRAX, PORCINE (CHINA): 14 April 2010, At 8 pm on 29 Mar 2010, the Jingyuan County Animal Disease Prevention and Control [Center] received a report from the Dawan Township Veterinary Station saying that swine deaths had occurred for unknown reasons on Zhuzhule Farm in Dongzhuang Village, requesting assistance with diagnosis. The Jingyuan County Animal Disease Prevention and Control Center quickly sent officers and technical personnel to the scene. Based on epidemiological survey, clinical symptoms, and etiological investigation, anthrax was confirmed. The site was closed off and other response measures taken. 101 swine on Zhuzhule Farm were culled and safely disposed of, and the area was strictly closed off and disinfected. (Anthrax is listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

VIRAL HEMORRHAGIC FEVER (SOUTH AFRICA): 14 April 2010, A patient suspected of having a viral hemorrhagic fever was admitted to East London's Life St Dominic's Hospital last night [12 Apr 2010]. Hospital manager Kurt Wylie said when the patient was admitted 3 patients were moved to Life East London Hospital because they were occupying an area designated for isolating suspected highly infectious cases. Wylie allayed fears over the danger of the disease and said Life St Dominic's was fully equipped to handle suspected and confirmed cases. "There is no cause for alarm," he said. "The National Institute of Communicable Diseases (NICD) and the Department of Health have been notified of the suspected case. Until such time as the case is confirmed (and thereafter if it is confirmed), the patient will be nursed in accordance with the NICD protocols." The identity of the patient or where he is from could not be confirmed last night. Viral hemorrhagic fevers are a diverse group of illnesses caused by 5 different families of viruses. All are characterized by fever and bleeding disorders and all can progress to high fever, shock and, in extreme cases, death. Some cause relatively mild illnesses, while others, such as the African Ebola virus, can cause severe, life-threatening disease. (Viral Hemorrhagic Fever is listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

HANTAVIRUS INFECTION (TAIWAN): 12 April 2010, The Department of Health's Centers for Disease Control confirmed 9 Apr [2010] that a 36-year-old man in Taipei County's Wugu Township had contracted the Category 2 contagion hantavirus hemorrhagic fever with renal syndrome. Lin Kuo-ning, head of the Taipei County Public Health Bureau's Disease Control Division, said the man first experienced nosebleeds and coughing on 8 Mar 2010 and went to the emergency room on 18 Mar 2010 with a high fever. Fortunately, the doctor realized the symptoms were unusual and immediately hospitalized the patient. Upon complete recovery, he was released on 26 Mar 2010, and blood tests showed his was the 1st confirmed case of hantavirus hemorrhagic fever since 2009. Although none of the man's family members living with him showed any symptoms, blood samples were taken, and health workers set rodent traps in the man's home and workplace to try to locate the source of the virus. The Public Health Bureau will coordinate with the Environmental Protection Bureau to eradicate rats in the area. Lin said HFRS is carried by rodents, most commonly in Taiwan by the tanezumi rat and Brown rat. It spreads to humans when they breathe in the virus or come in contact with rat secretions or saliva infected with it. It has an incubation period of 2-4 weeks. If treatment is not received in the 1st 20 days, after the patient's fever subsides, they may go into shock and die from sudden hypotension and hemorrhaging. If the disease is identified early, however, the death rate is not high. CDC officials said hantaviruses are not normally transmitted among humans, with only one case of human transmission of hantavirus pulmonary syndrome known to have occurred in Argentina. [This statement is not correct. Andes hantavirus has been transmitted between people occasionally, mainly in Chile. According to CDC statistics, from 1997 to 2007, 382 cases of possible HFRS were reported in Taiwan, with 9 cases verified. Two cases of HPS out of 115 reported cases were confirmed in that time. Wugu Township chief Chang Dang-mu said on 10 Apr 2010 that he was unaware that a Wugu resident had contracted hantavirus but immediately called on the township health office and cleaning squad to coordinate sanitation of the whole area. (Emerging Infectious Diseases are listed in Category C on the CDC list of Critical Biological Agents) *Non-suspect case

OTHER RESOURCES AND ARTICLES OF INTEREST

More information concerning Public Health and Emergency Preparedness can be found at the Office of Preparedness and Response website: http://preparedness.dhmh.maryland.gov/

Maryland's Resident Influenza Tracking System: www.tinyurl.com/flu-enroll

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NOTE: This weekly review is a compilation of data from various surveillance systems, interpreted with a focus on a potential BT event. It is not meant to be inclusive of all epidemiology data available, nor is it meant to imply that every activity reported is a definitive BT event. International reports of outbreaks due to organisms on the CDC Critical Biological Agent list will also be reported. While not "secure", please handle this information in a professional manner. Please feel free to distribute within your organization, as you feel appropriate, to other professional staff involved in emergency preparedness and infection control.

For questions about the content of this review or if you have received this and do not wish to receive these weekly notices, please e-mail me. If you have information that is pertinent to this notification process, please send it to me to be included in the routine report.

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